IN THE CLAIMS:

A complete listing of the claims is set forth below. Please amend the claims as

follows:

1. (Currently Amended) A computer-implemented method for solving a

supply chain planning problem, comprising the steps of:

decompositioning the supply chain planning problem into a plurality of

independent sub-problems;

providing a plurality of distributed <u>database partitions</u>, partitions in a database,

each partition of said plurality of distributed database partitions associated with a

respective independent sub-problem of said supply chain planning problem;

operating at least one processor in said database, each of said at least one

processor associated with a respective partition of said plurality of distributed <u>database</u>

partitions;

forming a plurality of distributed sub-problem partitions, each of said distributed

sub-problem partitions including a plurality of related items and associated with a

respective independent sub-problem of said supply chain planning problem;

loading data into a plurality of distributed database partitions, said data

associated with said plurality of related items, and each of said distributed database

partitions associated with a respective one of each of said distributed sub-problem

partitions; and

solving each of said plurality of said independent sub-problems by separate

processes operating in parallel in said database.

2. (Previously Presented) The method of Claim 1, further comprising the

steps of:

forming a plurality of clusters, each of said clusters including said plurality of

related items; and

forming said plurality of distributed sub-problem partitions from said plurality of

clusters.

3. (Previously Presented) The method of Claim 1, wherein the number of

distributed sub-problems is equal to the number of database partitions.

4. (Original) The method of Claim 1, wherein said plurality of related items

are related by one or more pre-defined relationship rules.

5. (Original) The method of Claim 2, wherein the step of forming said

plurality of said clusters further comprises a step of assigning a CLUSTER_ID to each

item of said plurality of related items.

6. (Previously Presented) The method of Claim 2, wherein the step of

forming a plurality of distributed sub-problem partitions from said plurality of clusters

further comprises a step of equally sizing said distributed sub-problem partitions.

7. (Previously Presented) The method of Claim 1, wherein the step of

solving each of said plurality of said distributed sub-problems further comprises a step

of solving said plurality of independent sub-problems in parallel.

8. (Canceled)

9. (Currently Amended) A computer-implemented method for solving a

supply chain planning problem, comprising the steps of:

decompositioning the supply chain planning problem into a plurality of

independent sub-problems;

providing a plurality of distributed <u>database partitions</u>, partitions in a database,

each partition of said plurality of distributed database partitions associated with a

respective independent sub-problem of said supply chain planning problem;

operating at least one processor in said database, each of said at least one

processor associated with a respective partition of said plurality of distributed <u>database</u>

partitions;

storing data associated with at least one new item in a temporary database

location;

forming at least one cluster, said at least one cluster including said data

associated with said at least one item;

merging said at least one cluster with at least one cluster associated with at least

one distributed sub-problem partition;

loading said data into at least one distributed database partition, said at least one

distributed database partition associated with said at least one distributed sub-problem

partition; and

solving said at least one independent sub-problem by separate processes

operating in parallel in said database.

Response to Office Action Attorney Docket No. 020431.0947 Serial No. 09/963,960 Page 4 of 17 10. (Currently Amended) A computer-implemented system for solving a

supply chain planning problem, comprising:

a plurality of independent sub-problems decomposed from said supply chain

planning problem;

a database, said database including a plurality of distributed database partitions,

each partition of said plurality of distributed database partitions associated with a

respective independent sub-problem of said supply chain planning problem; and

at least one processor operating in said database, the at least one processor

associated with a respective partition of said plurality of distributed <u>database</u> partitions,

and collectively operable to:

form a plurality of distributed sub-problem partitions, each of said

distributed sub-problem partitions including a plurality of related items and associated

with a respective independent sub-problem of said supply chain planning problem;

load data into a plurality of distributed database partitions, said data

associated with said plurality of related items, and each of said distributed database

partitions associated with a respective one of each of said distributed sub-problem

partitions; and

solve said plurality of said independent sub-problems by separate

processes operating in parallel in said database.

11. **(Previously Presented)** The system of Claim 10, further operable to:

form a plurality of clusters, each of said clusters including said plurality of related

items; and

form said plurality of distributed sub-problem partitions from said plurality of

clusters.

12. **(Previously Presented)** The system of Claim 10, wherein the number of

distributed sub-problems is equal to the number of database partitions.

13. (Original) The system of Claim 10, wherein said plurality of related items

are related by one or more pre-defined relationship rules.

14. (Previously Presented) The system of Claim 11, wherein said at least one processor is further operable to:

assign a CLUSTER_ID to each item of said plurality of related items.

15. **(Previously Presented)** The system of Claim 10, wherein said at least one processor is further operable to:

equally size said distributed sub-problem partitions.

16. **(Previously Presented)** The system of Claim 10, wherein said at least one processor is further operable to:

solve said plurality of independent sub-problems in parallel.

17. (Canceled)

18. (Currently Amended) A computer-implemented system for solving a

supply chain planning problem, comprising:

a plurality of independent sub-problems decomposed from the supply chain

planning problem;

a database, said database comprising a plurality of distributed database

partitions and a temporary storage location, each partition of said plurality of distributed

database partitions associated with a respective independent sub-problem of said

supply chain planning problem; and

at least one processor operating in said database, the at least one processor

associated with a respective partition of said plurality of distributed <u>database</u> partitions,

and collectively operable to:

store data associated with at least one new item in the temporary

database location;

form at least one cluster, said at least one cluster including said data

associated with said at least one item;

merge said at least one cluster with at least one cluster associated with at

least one distributed sub-problem partition;

load said data into at least one distributed database partition, said at least

one distributed database partition associated with said at least one distributed sub-

problem partition; and

solve said at least one independent sub-problem by separate processes

operating in parallel in said database.

19. (Currently Amended) Software for solving a supply chain planning

problem, the software being embodied in computer-readable media and when executed

operable to:

decompose the supply chain planning problem into a plurality of independent

sub-problems;

provide a plurality of distributed database partitions, partitions in a database,

each partition of said plurality of distributed database partitions associated with a

respective independent sub-problem of said supply chain planning problem;

operate at least one processor in said database, each of said at least one

processor associated with a respective partition of said plurality of distributed database

partitions;

form a plurality of distributed sub-problem partitions, each of said distributed sub-

problem partitions including a plurality of related items and associated with a respective

independent sub-problem of said supply chain planning problem;

load data into a plurality of distributed database partitions, said data associated

with said plurality of related items, and each of said distributed database partitions

associated with a respective one of each of said distributed sub-problem partitions; and

solve each of said plurality of said independent sub-problems by separate

processes operating in parallel in said database.

20. (Previously Presented) The software of Claim 19, when executed further

operable to:

form a plurality of clusters, each of said clusters including said plurality of related

items; and

form said plurality of distributed sub-problem partitions from said plurality of

clusters.

21. **(Previously Presented)** The software of Claim 19, wherein the number of

distributed sub-problems is equal to the number of database partitions.

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are related by one or more pre-defined relationship rules.

23. (Original) The software of Claim 20, wherein forming said plurality of said

clusters further comprises assigning a CLUSTER_ID to each item of said plurality of

related items.

24. (Previously Presented) The software of Claim 20, wherein forming a

plurality of distributed sub-problem partitions from said plurality of clusters further

comprises equally sizing said distributed sub-problem partitions.

25. (Previously Presented) The software of Claim 19, wherein solving each

of said plurality of said distributed sub-problems further comprises solving said plurality

of distributed sub-problems in parallel.

26. (Canceled)

27. (Currently Amended) Software for solving a supply chain planning

problem, the software being embodied in computer-readable media and when executed

operable to:

decompose the supply chain planning problem into a plurality of independent

sub-problems;

provide a plurality of distributed database partitions, partitions in a database,

each partition of said plurality of distributed database partitions associated with a

respective independent sub-problem of said supply chain planning problem;

operate at least one processor in said database, each of said at least one

processor associated with a respective partition of said plurality of distributed database

partitions;

store data associated with at least one new item in a temporary database

location;

form at least one cluster, said at least one cluster including said data associated

with said at least one item:

merge said at least one cluster with at least one cluster associated with at least

one distributed sub-problem partition;

load said data into at least one distributed database partition, said at least one

distributed database partition associated with said at least one distributed sub-problem

partition; and

solve said at least one independent sub-problem by separate processes

operating in parallel in said database.

28. (Previously Presented) The method of Claim 1, wherein said supply

chain planning problems comprise problems selected from the group consisting of

demand forecasting, service level planning, and replenishment planning.

29. (Previously Presented) The system of Claim 10, wherein said supply

chain planning problems comprise problems selected from the group consisting of

demand forecasting, service level planning, and replenishment planning.

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(Previously Presented) The software of Claim 19, wherein said supply 30. chain planning problems comprise problems selected from the group consisting of demand forecasting, service level planning, and replenishment planning.